AR-6040/6080/6160

H.264 DVR

User Manual

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GVI Security

Safety Warning

Retain and follow all safety and operating instructions. Observe all warnings on products. Unplug the product from the electrical outlet and discontinue use if the following conditions exist: The power cord or plug is damaged; the product is exposed to liquid; the product is dropped or an object falls on the product; the product is noticeably overheated. Read this manual carefully before installing the unit. Please read this manual first for correct installation and operation.

Never install the device on a ceiling that cannot hold its weight. The product may fall down and cause damages. Never install or use the device in areas exposed to water, oil, or gas. The water, oil, or gas may result in operation failure, electric shock, or fire. Do not use this unit near water (e.g., near a bath tub, wash bowl, kitchen sink, laundry tub, wet basement, swimming pool, unprotected outdoor installation, or any area which is classified as a wet location). Never face the device toward the sun. Direct sunlight may cause fatal damage to sensors and internal circuits. Touching a wet power cord with hands or touching the power cord with wet hands may result in electric shock.

Do not service any product yourself. Opening or removing covers that are marked with warning symbols or labels may expose you to electric shock. Service needed on components inside these compartments should be done by an authorized service provider. Replace any batteries with the equivalent battery type. Failure to do so may cause damage or bodily injury. There is a danger of explosion if batteries are incorrectly replaced. Dispose of all used batteries according to the manufacturer's instructions.

Install the system in an environment where the ambient temperature does not exceed the maximum rated ambient temperature of the rack mount system. Ensure there are no obstructions to the case ventilation. Blocking any of the built-in airflow may cause overheating. The product must be connected to a circuit with an adequate rating to prevent an over-current condition on the circuit. Slots in the product are provided for ventilation and should never be blocked or covered since these protect it from overheating. The openings should never be blocked by placing the product on a flexible surface. The product should not be placed in a built-in apparatus unless the apparatus has been designed to accommodate the product, proper ventilation is provided for the product, and the product instructions have been followed.

Operate the product only from the type of power source indicated on the product's electrical ratings label. If you have questions about the type of power source to use, contact your authorized service provider. The power outlet for the power cord should be easily accessible and located as close to the equipment operator as possible. When you need to disconnect power to the equipment, unplug the power cord from the electrical outlet. When disconnecting a power cord/cable from an outlet, pull on the connector. Never pull on the cable itself to disconnect from the power source. Handle all equipment with care when disconnecting from the product or the power source. Equipment may be hot. The power cord must be properly rated for the product and for the voltage/current marked on the product's electrical ratings label. The voltage/current rating of the cord should be greater than the voltage/current rating marked on the product. Do not overload an electrical outlet, power strip, or convenience receptacle. Use care when moving products to other countries with different voltage standards. Substitution for the power supply may result in destruction of the product or personal injury.

Unplug the product from the wall outlet prior to cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning. Never insert a foreign object into the product's openings or ventilation slots. The product should be placed away from radiators, heat registers, stoves, or other pieces of equipment (including amplifiers) that produce heat. Allow sufficient air circulation around the product and power supply during use to ensure adequate cooling of the device. Prevent direct exposure to radiant heat sources. Contact the provider if replacement parts are required. Use only the parts, upgrades, and options sent or obtained from the provider.

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I.0 Overview

AR-6040/6080/6160 H.264 DVR is an integrated digital video recorder that combines the features of a time-lapse audio/video recorder, a multiplexer, and a video server to create a single security solution.

The outstanding quad-plex operation enables users to view live video, search, and playback any recorded video by date/time or event and remotely monitor the unit via internet; meanwhile, the DVR recording is running simultaneously.

AR-6040/6080/6160 H.264 DVR provides the latest H.264 compression mode and a user friendly Graphical User Interface (GUI) that optimizes function control. AR-6040/6080/6160 H.264 DVR also supports Full HD 1080p output.

AR-6040/6080/6160 H.264 DVR is pre-installed with remote viewing and configuration software which is a Web-browser plug-in allowing users to view live or recorded video images and enables remote configuration. The remote software is stored in AR-6040/6080/6160 H.264 DVR and deployed over a LAN, WAN, or Internet connection to remote Windows-based computers. This feature simplifies the installation and maintenance of the software components so all remote users are using the same software coming from the unit.

2.0 System Setup

The following chapter describes the system installation. Follow the instructions to operate the unit.

In order to prevent the unit from data loss and system damage caused by a sudden power fluctuation, use of an Uninterruptible Power Supply (UPS) is highly recommended.

2.1 Connect Devices to the DVR

Prior to powering the unit, connect cameras and a monitor to the unit for basic operation. If needed, connect a Spot Monitor for displaying full screen video of all installed cameras in sequence.

If any temporary device is installed to the DVR (such as a USB ThumbDrive® or any other USB devices) ensure the devices are connected only after the unit is powered. The DVR can recognize the external devices only after the powering process is finished.

2.2 Rear Panel Connections

There are various connectors on the rear panel for the DVR installations. The following information shows the detailed description of each connector.

Main Monitor (BNC/ VGA/ Digital Output)

The DVR supports three different types of monitor outputs: BNC, VGA, or Digital Output. The main monitor displays live image and playback recorded video in full-screen or split-window format.

Note: The DVR can only connect to one main monitor at a time. There is no simultaneous display.

Spot Monitor

The BNC Spot Monitor connector allows users to connect an optional Spot Monitor to display full screen video of all connected cameras in sequence.

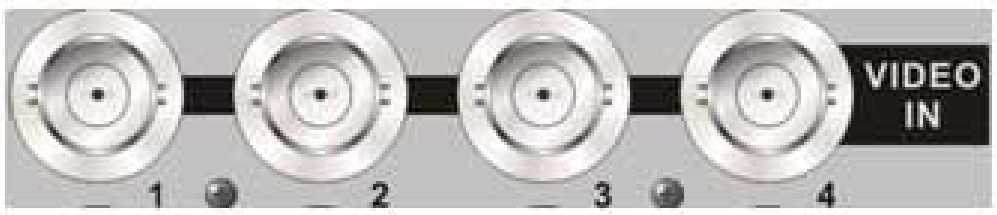
Audio Out – Main & Spot

Main & Spot Audio Out RCA connectors are used to connect the DVR with audio output devices (e.g. amplified speakers). “Main Audio Out” uses the audio from the main monitor whereas “Spot Audio Out” uses the audio from the Spot Monitor.

Video In

Use a group of BNC connectors for video input from installed cameras. The number of BNC connectors equals the number of channels.

Ex: AR-6040

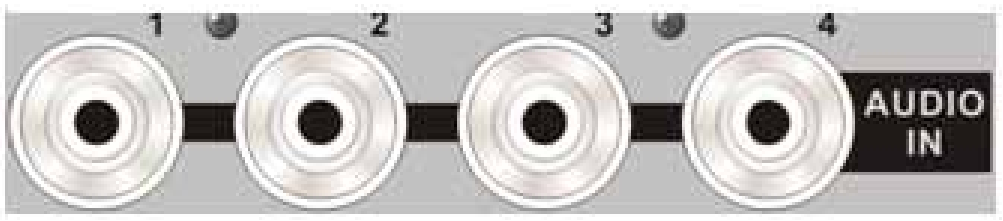


Note: The DVR detects a video source and automatically adjusts the system to a NTSC or PAL.

Audio In

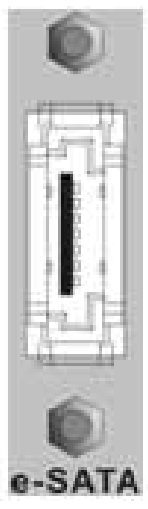
A group of RCA connectors is provided for audio input of corresponding cameras. The number of connectors equals the number of channels.

Ex: AR-6040



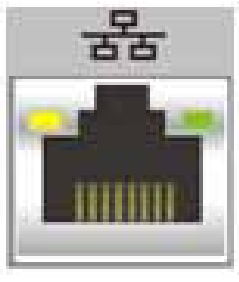
e-SATA (16CH models only)

The e-SATA port allows users to connect an external SATA device for recorded video backup. (e-SATA port may not be active based on the FW release. Please contact GVI Security Tech Support Team to learn more about to have e-SATA port activated.)



LAN Connector (RJ-45)

The DVR is capable of networking. Once the unit is connected to the LAN network, users can remotely access the unit through Internet Explorer.



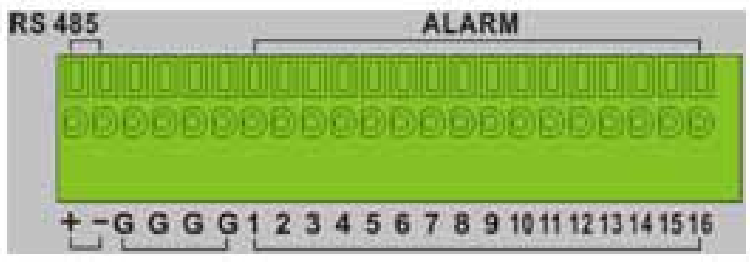
USB Connector

There is one USB port on the back panel. Connect USB devices such as a USB mouse or USB memory device to this port.

RS-485 & Alarm In

The terminal block connector allows the ports to connect RS-485 and Alarm In devices.

Ex: AR-6160



Alarm Out

Connect up to three sets of alarm out devices to the alarm out terminal block.

Power Jack

The DVR has a 12V DC power connection jack. Connect the power adapter provided with the unit.

3. OSD Operation

Prior to operating the DVR, setup the general configuration. The following subsections introduce the function keys located on the front panel and the general configuration of the DVR.

The regular displayed OSD information and its displayed positions are shown in the following figure. The title of the channel displays on the top-left corner of the window either in full-screen mode or in multiple channel modes. The current date/time information displays at the bottom-right corner of the screen. The operation status displays in the functional status bar. Move the cursor to any status icon and its description displays.

CH1	CH2	CH3	CH4
CH5	CH6	CH7	CH8
CH9	CH10	CH11	CH12
CH13	CH14	CH15	CH16

2011.01.19 04:31:22 AM

3.1 Front Panel Introduction

The controls on the front panel enable users to control the unit and preset the programmable functions.

3.1.1 LED Definition

The LEDs on the front panel of the DVR are described as follow.

Alarm LED
The LED lights up when an alarm event triggers.

LAN LED
The LED lights up when the DVR is connected to a network and blinks when the data is being transferred.

REC LED
The LED blinks while the DVR is recording.

3.1.2 Function Keys

This section describes the functional keys on the front panel of the DVR.

Play
Press Play once to begin playing recorded video. Press Play again to exit.

Note: According to the record setting, part of the latest video cannot be played back because the video is still saved in the buffer.

Pause
Press Pause to freeze live video. The date/time information shown on the monitor continues updating in this mode. Press PAUSE again to return to live mode.

Press Pause while playing the recorded video and the playback video pauses. Press LEFT/RIGHT to move the recorded video reverse/forward. Press Pause again to return to the live viewing mode.

Sequence
Press Sequence to start an automatic sequence display of video from all installed cameras.

Display
Press Display to select the preferred monitor display format. The available display modes include: full-screen, 4-window split (2×2), 9-window split (3×3), and 16-window split (4×4).

Menu
Press Menu to enter the OSD setup menu.

Search
In both Playback and Live mode, press Search to enter the Search menu to search and playback recorded video by date/time or events. Press Search twice to instantly playback the latest recorded videos.

Channel
In both Live and Playback modes, press Channel to view the corresponding video in full screen. The number of the Channel keys corresponds to the number of cameras supported by the unit.

In the OSD number keyboard, press keys 1~9 to input numbers 1~9, and press 10 to input number 0.

Power
Press and hold Power to power or shutdown the DVR.

PTZ
Press PTZ to enter PTZ control mode. In PTZ Control mode, press “1” to access the Preset Settings menu. For 16CH models, press keys 11~16 to quickly access preset points 1~6. In Zoom mode, press the direction keys to move in the desired directions.

Lock
When password protection is disabled, press Lock for five seconds to lock up the system. Press and hold the Exit key for five seconds again to unlock the system.

Note: Enter the OSD menu and go to “System” “User Information” to enable or disable the password protection.

Spot
In Live mode, press Spot to enter Spot Monitor control mode.

Direction Keys
In the OSD setup menu, the LEFT/ RIGHT keys are used to move the cursor to the previous or next fields. To change the value in the selected field, press the UP/ DOWN keys.

Enter
In the OSD setup menu or selection interface, press Enter to confirm the selection.

In live full-screen view mode, press Enter to view a 2x zoomed image; press it again to exit the Zoom mode.

Exit
Press Exit to cancel or exit from certain modes or the OSD setup menu.

3.2 Enter OSD Setup Menu

Customize the DVR configuration by entering the intuitive Graphical User Interface (GUI) OSD setup menu. Press MENU and select an account to login. Enter a corresponding password. The preset password for the administrator account “admin” is “1111”.

NOTE: Change the preset password to prevent unauthorized access to the unit.

An icon displays at the status bar showing the privilege level of the account, which ranks from 1 to 8. Under the logout condition, the “Guest” icon displays.

There are two types of logout procedures. Manually logout by pressing the Exit key in Live mode or automatically logout when keys are not pressed for 5 minutes in Live/Menu mode.

3.2.1 User Information

The DVR provides the option to create up to seven sets of usernames and passwords with customized authority, excluding the preset “admin” account. From the Main Menu, select “System” → “User Information” and the menu displays as follows:

USER INFORMATION	
ENABLE PASSWORD	ON
USER SETUP	
PRIVILEGES	
LOAD DEFAULT	NO

Enable Password

Select “ON” to request username and password for accessing functions listed in Authority Setup menu or select “OFF” to allow free access.

User Setup

Setup a customized account, password, and privilege level in this menu. The account name is case sensitive. The privilege level rank is from levels 1~8, and level 8 has the highest privilege. Alternatively, select “DISABLE” to stop using the account.

Note: Users cannot change the username and authority level of the preset “admin” account.

Privileges

Setup the privilege level for accessing the functions listed in this menu. The functions include: Playback/Search, PTZ Control, Live Operation, Spot Monitor, Export, Main Menu, System, Network, Device, Record, Event, and Shutdown. The privilege level is ranked from levels 1~8, and level 8 has the highest privilege. Alternatively, select “ALL LEVELS” to allow free access.

Note: Users cannot set the Menu Access to “ALL LEVELS”.

When the account does not have authority to access certain functions, an error message displays on the screen.

Load Default

Select “Yes” to load the default setting.

3.3 Power Up/Shutdown the DVR

If shutting down the DVR for any reason, use the proper shutdown and powering procedures to avoid damaging the DVR.

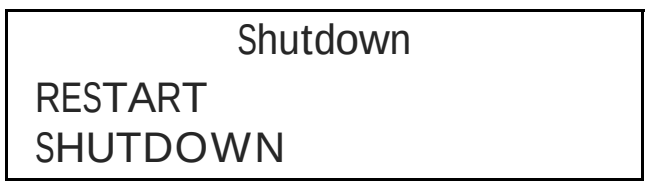
Powering the Unit

Plug in the power adapter that came with the package and the DVR begins to boot.

The VideoPlus logo, color bar, and system checking information display on the monitor and then disappear when the unit is completely powered up.

Restart/Shutdown the Unit

Press MENU and input the username and password that has sufficient authority to access the OSD setup menu. Select "SHUTDOWN" in the OSD setup menu and press Enter to go to the Shutdown menu, which displays as follows.



"RESTART"

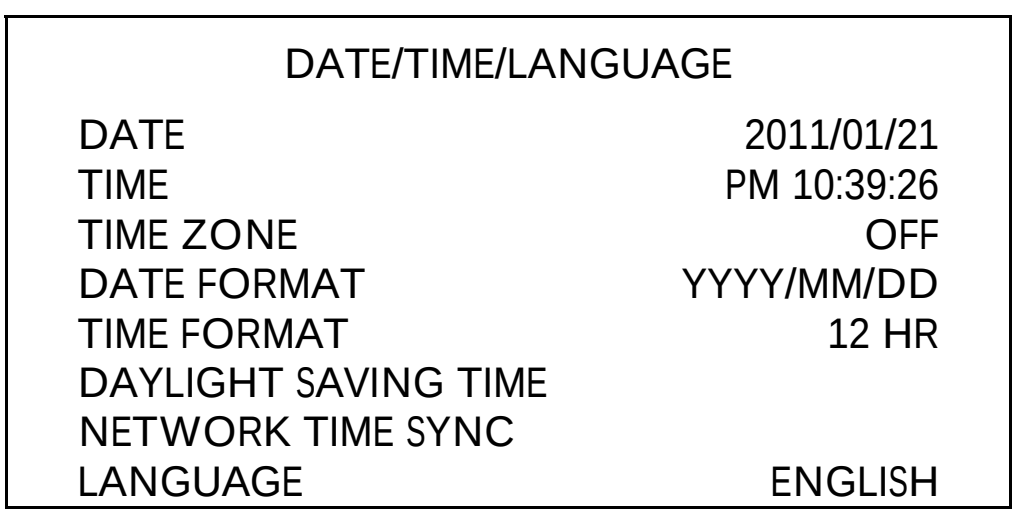
Select this item to reboot the unit. The VideoPlus logo, color bar, and system checking information display on the monitor until the unit completely restarts.

"SHUTDOWN"

Select this item to shut down the unit. Do not remove the power during shutdown until the message "You can safely turn off DVR now!" displays.

3.4 System Date/Time Setting

Users can set the current date, time, and other OSD parameters in the DATE/TIME/LANGUAGE menu (under System menu). The login account should have privilege to access the System menu. In the OSD setup menu, select "System" and press Enter. Then select "DATE/TIME/LANGUAGE;" the menu displays as follows.



3.4.1 Set Date/Time

Set DATE/TIME

Select "DATE" / "TIME" and press Enter to adjust the settings. LEFT/RIGHT keys are used to move the cursor to the previous or next field, Enter is for confirming the selection, and use the UP/DOWN keys to change the value in the selected field.

Note: The new date/time setting applies to recording new video. The date and time of previously recorded video does not change. If changing time settings, format the HDDs to avoid database corruption.

DATE FORMAT

This function allows users to set the OSD display type of the date. There are three options from which to select: "YYYY/MM/DD", "MM/DD/YYYY", or "DD/MM/YYYY". "YYYY" represents "Year", "MM" represents "Month", and "DD" represents "Day".

TIME FORMAT

Users can set the time format to "12 HR" or "24 HR". Use the UP/DOWN keys to change the format.

3.4.2 Daylight Savings Time

APPLY DST

This feature temporarily adjusts the time in certain regions to observe Daylight Saving Time. Select “ON” to enable or “OFF” to disable the feature.

If the feature is disabled, the DST Start/End time and DST Bias are not available.

Note: If this function is enabled, the date/time information displays on the screen with a DST icon when playing back recorded video or searching video in the event list. “S” indicates summertime and “W” indicates wintertime.

DST BEGIN/END

Use the options to program the daylight saving duration. Use the LEFT/RIGHT keys to move the cursor to the next or previous field and the UP/DOWN to change the settings in the selected field.

3.4.3 Network Time Sync

TIME ZONE

Select “TIME ZONE” to setup the correct time zone for the location.

Note: The “**TIME ZONE**” must be set to the correct local time zone or the “**NETWORK TIME SYNC**” option does not function correctly.

NETWORK TIME SYNC

After setting up the correct time zone, the “**NETWORK TIME SYNC**” option is accessible. Select “**TIME SERVER**” to setup the time server. The default time server is time.nist.gov, but the users can change to any other time server if preferred. A list of IP addresses of the time servers is listed below.

129.6.15.28	129.6.15.29	132.163.4.101
132.163.4.102	132.163.4.103	128.138.140.44
192.43.244.18	131.107.1.10	69.25.96.13
206.246.118.250	208.184.49.9	64.125.78.85
207.200.81.113	64.236.96.53	68.216.79.113

After setting the time server, set “**MANUAL INTERVAL**” to “YES” to sync the time immediately. The time sync can also be updated periodically. Set “**INTERVAL**” to “ON” and the time automatically syncs once an hour.

3.5 Record Schedule/Quality Setting

The Record menu allows users to set recording quality, recording schedules, and other recording parameters. Login with an authorized account to access the Record menu. In the Main menu, select “Record” and press Enter; the following menu displays.

Record	
RECORD SETUP	
SCHEDULING	
QUALITY / FPS	AUTO SCHEDULE
ADVANCED SETUP	
AUTO SCHEDULE SETUP	
DISK END MODE	OVERWRITE
ERASE DATA	

3.5.1 Record Setup

The RECORD SETUP menu allows users to setup record resolution. The relative record settings, such as preset configuration, follow the record mode setting. See the example below of the display menu.

RECORD SETUP	
RESOLUTION	720X480 (D1)
CBR/VBR	CBR
FORMAT	H.264
TOTAL FPS	60

- Select RESOLUTION of the video from 720X480 (D1), 720X240 (Half DI), and 352X240 (CIF) for NTSC systems. If the video system is PAL, the options are 720X576 (D1), 720X288 (Half DI), and 352X288 (CIF)
- Set the recording bit rate as CBR (Constant Bit Rate) or VBR (Variable Bit Rate)
- FORMAT of the video is H.264
- TOTAL FPS changes automatically according to the selected RESOLUTION

Use VBR encoding when reliable video quality is the highest priority.

Note: Since a VBR file does not have a fixed size, the HDD space usage cannot be calculated and, therefore, the “Advanced Record” setting is not supported for VBR mode. Therefore, if the “Advanced Record” is selected as the default record configuration, the selection of this menu item is automatically set as “CBR”.

3.5.2 Scheduling

Use the SCHEDULING menu to set the day and night time or weekend recording schedule. Select “SCHEDULING” from the Record menu and press Enter; the following menu displays.

SCHEDULING	
DAY BEGIN	AM 06:00
DAY END	PM 06:00
NIGHT BEGIN	PM 06:00
NIGHT END	AM 06:00
WEEKEND SCHEDULE	ON
WEEKEND BEGIN	Fri PM 06:00
WEEKEND END	Mon AM 06:00

- Make appropriate changes of the begin/end time of Day and Night using Direction keys
- Press Enter to confirm the settings or Exit to cancel
- If a weekend record is required, select “ON” to enable the Weekend Schedule in advance and then set the Weekend begin/end time
- Press Exit to return to previous page

3.5.3 Quality/ FPS

Use the “QUALITY/FPS” to select the recording quality and frame rate. In normal circumstances, set the quality configuration as “BEST”. The following table shows the FPS and picture size under “BEST” in D1 mode for AR-6160 as an example.

D1 mode (NTSC: 720X480@120FPS; PAL: 720X576@100FPS)			
Normal PPS	**Normal Size**	**Event PPS**	**Event Size**
7.5 NTSC (6.25 PAL)	10 KB / PIC	30 NTSC (25 PAL)	10 KB / PIC

3.5.4 Advance d Setup

Use this function to set the Day/Night/Weekend FPS (Frame per Second) and Quality separately for each channel. Set the QUALITY/FPS selection to “ADVANCED SETUP” to set these schedules. The menu displays as shown below (Record Mode: 720X480@120FPS in NTSC/720X576@100FPS in PAL).

ADVANCED SETUP			
CHANNEL			CH01
	DAY	NIGHT	WEEKEND
NORMAL FPS	7.5	7.5	7.5
NORMAL QUALITY	HIGH	HIGH	HIGH
EVENT MAX FPS	30	30	30
EVENT QUALITY	BEST	BEST	BEST

- Select a CHANNEL for setting its record configuration
- Move the cursor using Direction keys and press Enter to select an item
- Change the value using UP/DOWN keys
- Press Enter to confirm the settings or Exit to cancel
- Press Exit to return to the Record menu

The total normal FPS for all channels cannot exceed 120 NTSC/100 PAL. Reduce the other channels first to increase one channel’s FPS. Event FPS is not restricted to this rule since a smart event scheduler handles the total FPS with a correct weight.

3.5.5 Record Event Video Only

If the DVR starts recording only when alarm events trigger, follow the steps below:

- Enter the OSD setup menu with an authorized account
- In the OSD setup menu, select “Record.” Move the cursor to the item “QUALITY/FPS” and select “EVENT ONLY”

3.5.6 Auto Schedule Setup

This item aims to ease the complicated record settings and to make the setup much easier. Note that the item can be reached only when the “AUTO SCHEDULE” option is selected under the “QUALITY / FPS” menu.

Select “AUTO SCHEDULE SETUP” from “Record” and press Enter. The sub-menu appears as shown in the figure below.

AUTO SCHEDULE SETUP

RECORDING DAYS	7 DAYS
DAY RECORD	YES
NIGHT RECORD	YES
WEEKEND RECORD	YES
AVERAGE FPS	7.5
AVERAGE QUALITY	BEST

Use the following steps for the Setup ezRecord:

- Select “RECORDING DAYS” and press Enter. Press UP/DOWN to choose an option. The Average FPS & Quality adjust automatically. The size of the installed HDD determines the recording days. In other words, the larger the size of the HDD installed, the more days the DVR can record.
- Move to “DAY RECORD” and press Enter. This item determines whether the DVR records during daytime. If yes, use UP/DOWN to select “YES” and enable daytime recording; or select “NO” to disable daytime recordings.
- Repeat the same procedures through the third and fourth items. Note that “WEEKEND RECORD” is inaccessible if “WEEKEND SCHEDULE” in the “SCHEDULING” menu is set to “NO”.
- Select “AVERAGE FPS” and press Enter. Press UP/DOWN to make a selection. “RECORDING DAYS” is calculated automatically.
- Select “AVERAGE QUALITY” and press Enter. Press UP/DOWN to make a selection. “RECORDING DAYS” is calculated automatically.

Note: The number of connected cameras affects the recording quality automatically calculated through the “AUTO SCHEDULE SETUP;” therefore, once the number of connected cameras changes, reset the “AUTO SCHEDULE SETUP.”

3.5.7 Disk End Mode

When the HDD storage space reaches the end, users can choose to overwrite the old data or stop recording. The percentage of HDD usage displays at the status bar. Moreover, an “ALMOST FULL” icon displays at the status bar when HDD usage reaches 98%. In the mean time, an internal buzzer begins to beep.

From the Record menu, select “DISK END MODE” and press Enter. Select “OVERWRITE”/“STOP” using the UP/DOWN keys.

3.5.8 Erase Data

This menu is for users to delete recorded data. In the Record Setup menu, select "ERASE DATA" and press Enter. The menu displays as shown below.

ERASE DATA	
ERASE ALL	NO
ERASE EVENTS	NO
ERASE EVENTS BEFORE	2011/01/01
ERASE	NO

ERASE ALL

Use this menu item to delete all recorded video from the database. Set this item to "YES" using the UP/DOWN keys, and start deleting the data by setting the "ERASE" option to "YES".

ERASE EVENTS

Use this menu item to delete all event video from the database(s). Use the UP/DOWN keys to select "YES" and start the deletion by setting "ERASE" option to "YES".

ERASE EVENTS BEFORE

Use this menu item to delete event video before a specific date. Use the LEFT/RIGHT keys to move the cursor to the next or previous field, use Enter to select the item, and UP/DOWN to adjust the value.

ERASE

After selecting the video or data to be deleted, set this item to "YES" to start the deletion or choose "NO" to cancel.

3.6 Ev ent Setting

This menu allows users to determine the DVR's behavior in response to events. In the Main menu, move the cursor to "Event" and press Enter. The following menu displays. Items in the Event menu are described in the following subsections.

Event	
CAMERA SETTINGS	
REMOTE ALERT	
EVENT BEEP	On
E-MAIL NOTIFICATION	Off
POST-EVENT	20 Sec

3.6.1 Camer a Settings

Use this menu to configure the "Video Loss Detect", "Motion Detect", "Alarm In" and "Alarm Out" settings for each channel. The menu displays as shown below.

CAMEAR SETTINGS	
CHANNEL	CH01
ALARM INPUT	OFF
RELAY OUTPUT	OFF
VIDEO LOSS	OFF
MOTION	OFF
MOTION DETECTION	

Channel

Use this item to select a desired channel for setting the parameters. Move the cursor to "CHANNEL" and press Enter. Select a channel using the UP/DOWN keys. Press Enter again to confirm the selection.

Alarm Input

This menu item allows users to enable/disable alarm input detection. According to the user's application, select "N/O" (Normal Open) or "N/C" (Normal Close) to enable the alarm input detection, or select "OFF" to disable the detection.

If a user selects "N/C" without installing any device, an alarm triggers and the Event Icon displays on the monitor until the user changes the selection to "N/O", "OFF", or when a user installs a device.

Relay Output

This menu item allows users to enable/disable the relay output devices for the selected channel. Select "ON" to enable the relay output or "OFF" to disable it.

Video Loss

This item allows users to enable or disable Video Loss as an alarm event. Select "ON" to enable Video Loss alarm events or "OFF" to disable them.

Motion

This item allows users to enable or disable motion alert for the DVR. With motion alert enabled, an icon displays on the screen when an event triggers. Select "ON" to enable motion alert or "OFF" to disable it.

Motion Detection

If enabling motion alert, define the motion detection parameters such as detection area and sensitivity settings. Select "MOTION DETECTION" and press Enter. The Motion Detection menu displays as shown below.

MOTION DETECTION	
AREA	
SENSITIVITY	60 %
BLOCK THRESHOLD	4

AREA

After selecting this feature, the detected area displays. The detection area consists of 192 (16×12) detection grids.

Use the Direction keys to move the cursor and press Enter to select or de-select a grid. Press Display to select all of the grids for detection; press Display again to de-select all of the grids.

SENSITIVITY

Use this menu item to set the sensitivity of detection grids for the channel. A greater value indicates more sensitive motion detection. Move the cursor to "SENSITIVITY" and press Enter. Use the UP/ DOWN keys to adjust the value. The value increases in 4% increments.

Block Threshold

"BLOCK THRESHOLD" indicates the motion alarm triggered level from "1" to "16". Selecting "1" means the DVR triggers the alarm when one grid is detected, and selecting "16" means the DVR triggers the alarm when 16 grids are detected. Move the cursor to "BLOCK THRESHOLD" and press Enter. Use the UP/DOWN keys to adjust the value.

3.6.2 Remote Alert

This function allows users to send alert notifications to the CMS software.

REMOTE ALERT	
ALERT SETS	1
ALERT NOTIFICATION	OFF
ALERT IP	0.0.0.0
ALERT PORT	9999

Alert Sets

"ALERT SETS" provides 3 combinations of Alert Notification, IP, and Port.

Alert Notification

The four available options in this item are "OFF", "EVENT", "ALIVE", and "BOTH".

"**OFF**": The Alert Notification is turned off
"**EVENT**": When the event triggers, the DVR sends an alert message to the CMS
"**ALIVE**": The DVR sends a live message to the CMS periodically to show users that the connection between the DVR and CMS is in effect
"**BOTH**": This option enables the DVR to send both Event and Live alert messages to the CMS

Alert IP

The Alert IP must match the IP address of the computer with the CMS.

Alert Port

The ports for the DVR and the CMS Alert **MUST** be the same.

3.6.3 Event Beep

This menu item allows users to enable/disable the event beep of the DVR. If the user selects "ON," the buzzer activates in response to alarm events. If the user selects "OFF", the buzzer does not activate.

3.6.4 E- mail Notification

This menu item enables (On) / disables (Off) the e-mail notification of an event. When an alarm event triggers and "E-MAIL NOTIFICATION" enables, an e-mail regarding the alarm event goes out.

3.6.5 P ost-Event

This menu item determines the duration of the Event Beep and Relay Output activation after an event triggers. The available time range is from five second to six hours.

4.0 Basic Operation

The DVR allows users to access some general operations through the front panel easily. The following sections introduce the general operations of the unit.

4.1 Vie w Live/Playback Video

The general functions in Live and Playback modes are described in the following sections.

4.1.1 Display Modes

The DVR provides users versatile ways of live and recorded video views.

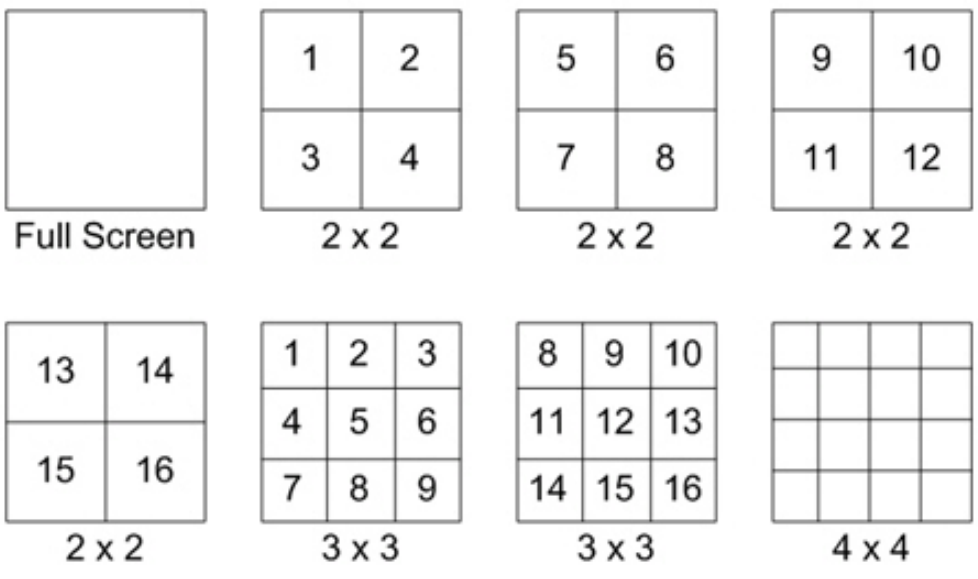
Display in Full Screen

Press any CHANNEL key to view the corresponding channel image in full-screen mode.

Display in Multi-window

Various split window displays are available. Press Display to switch between available displays.

The available display formats are illustrated in the following figure.



Note: 3x3 viewing mode is only available in the AR-6080 and AR-6160 models, whereas 4x4 viewing mode is only available in the AR-6160 models.

4.1.2 Digital Zoom

Users are able to view a 2x zoomed live video in full screen mode. To view the 2x zoomed video, follow the steps below.

- Press any CHANNEL key to view the video in full screen mode
- Press Enter to view 2x zoomed screen of the selected channel
- To view a specific area in 2x zoomed screen, use the Direction keys to pan/tilt the zoomed screen
- Either press Enter again or press Exit to leave the Zoom mode

4.1.3 View Live Cameras

Users can view live camera in various display modes including full-screen, 2x2, 3x3, and 4x4. The general operation under Live mode is described as follows.

Pause Live Image

Press Pause while viewing live image. The image pauses but the date/time information does not, and the system clock continues running. Press Pause again to resume the live camera view.

4.1.4 View Recorded Video

To view recorded video, press Play. The unit begins playing the recorded video from the suspended point of recording. If pressing Play for the first time, the unit plays back from the beginning of the recorded video. Users can select records from the Search menu to playback specific video.

Note: When playing back videos with mass motion recorded in D1 mode (resolution=720x480), press Sequence to switch on the "deflicker function" and avoid gleaming images. Press Sequence again to switch the "deflicker off" and the image returns to real D1 resolution.

The general operations in Playback mode are described below.

Using Keys Playback Mode

The key functions are slightly different in Playback mode.

- **LEFT** (Reverse Playback): Use this key to reverse the playback of the recorded video. Press the key repeatedly to increase the speed of the reverse playback by 1×, 2×, 4×, 8×, 16×, or 32×.

- **RIGHT** (Forward Playback): Use this key to playback the recorded video in fast forward. Press the key repeatedly to increase the speed of the forward playback by 1×, 2×, 4×, 8×, 16×, or 32×.

- **Pause:** Press Pause to pause the playback video. When the recorded video is paused, press LEFT/RIGHT to resume the video in a single step reverse/forward mode. Press Pause again to continue playing video.

- **Play:** Press Play to start or stop playing video and return to Live mode.

The Forward or Reverse speed indicator displays in the status bar when in Playback mode.

Pause Playback and Single Step Forward

Use the following steps to pause and resume recorded video.

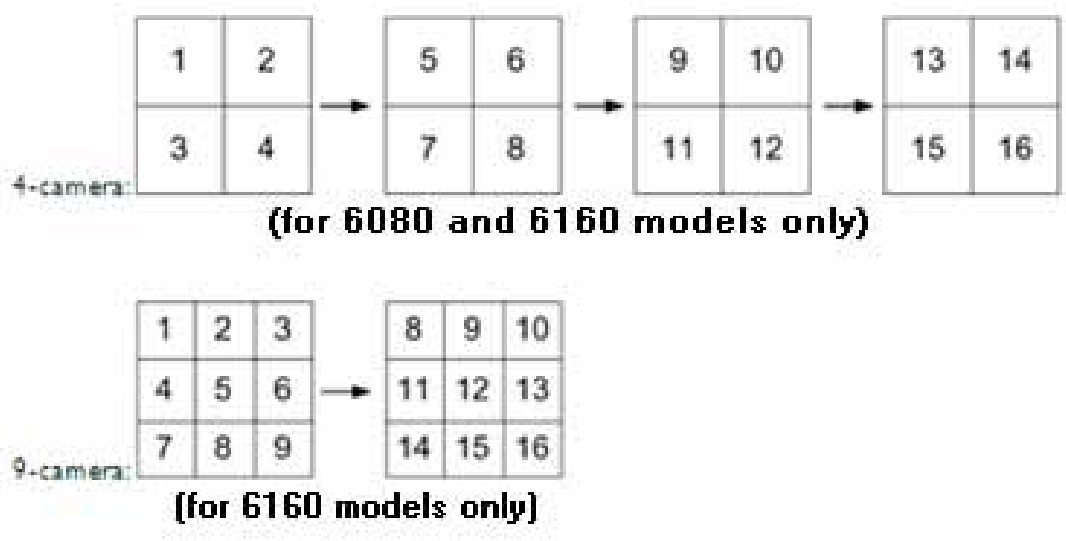
- Press any CHANNEL key to view the channel in full screen
- Press Pause to pause the current playback image
- Press the LEFT/RIGHT Direction keys to move the video in reverse/forward mode. Press and hold the LEFT/RIGHT keys to repeatedly reverse/forward the video in single steps
- Press Pause again to resume the playback operation

4.2 Sequence

This section includes information on the sequence mode with both Main Monitor and Spot Monitor, if connected. The Sequence function can avoid manual backtracking and provides more flexibility while monitoring surveillance.

4.2.1 Sequence with Main Monitor

Observe the Automatic sequence function in any display mode. Select certain display formats and press Sequence to toggle the automatic sequence; press Sequence/Exit to stop sequencing. The figure below displays the 4-camera and 9-camera sequencing display modes.



4.2.2 Sequence with Spot Monitor

Users are allowed to use the DVR front panel to control a Spot Monitor display without having to access the OSD menu. Two viewing modes display on Spot Monitor: Sequence display and Single camera display.

Use the following steps to control the Spot Monitor.

- Press the Spot key on the front panel to enter Spot Monitor Control mode. The icon representing “Spot Mode” displays on the status bar.

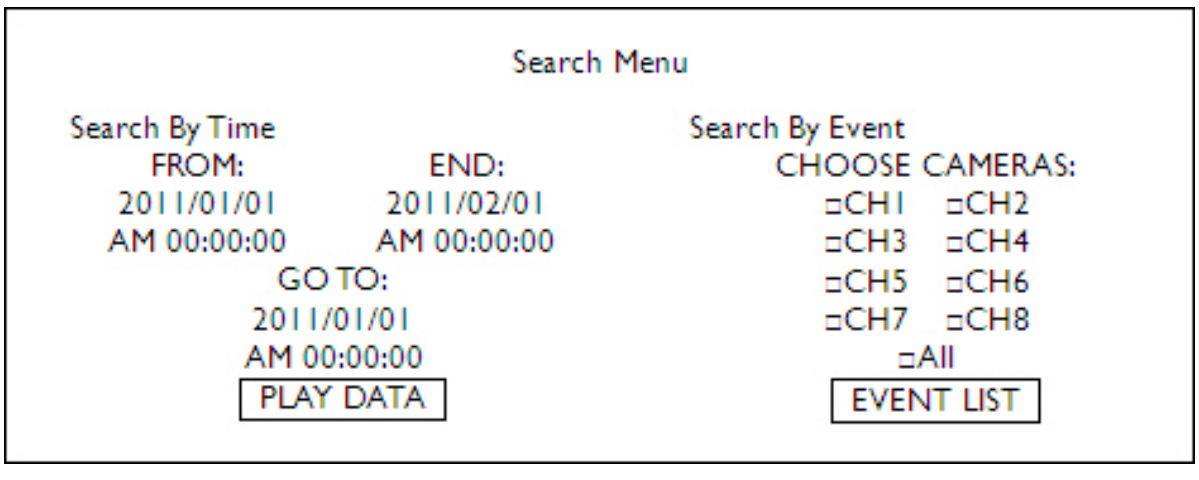
USE CH1 TO CH16 TO ASSIGN CAMERA USE SEQ TO RUN SEQUENCE

- Press the CHANNEL key to display the channel on Spot Monitor
- Press Sequence repeatedly to display the sequence of cameras previously programmed in the Spot Monitor Schedule menu
- Press Exit to return the front panel to Main Monitor Control mode

4.3 Sear ch Recorded Video

The DVR is capable of searching and playing back recorded video by time or by events. To search by time, select the specific date and time of the necessary video. To search by event, select channels to display the event list.

In Live or Playback mode, press Search to enter the Search menu.



4.3.1 Search by Time

Use the following steps to search video by date and time.

- Press Search to enter the Search menu
- Select “FROM” and press Enter to begin playing recorded video from the specified “FROM” time (the “FROM” option displays the time and date of the first recorded image)
- Select “END” and press Enter to begin playing recorded video from the specified “END” time (the “END” option displays the time and date of the last recorded image)
- Select “GO TO” and press Enter, then use the LEFT/RIGHT keys to choose the date/time. Adjust the values with the UP/DOWN keys (the “GO TO” displays the time and date which starts playback between “FROM” and “END”)
- Press Enter to confirm or press Exit to cancel
- Select “PLAY DATA” and press Enter to begin playing the selected video
- Press “Play” again to return to live video

Note: If there is no available recorded video that matches the specified time and date, the unit begins playing from the next available video. If the user enables the Daylight Saving Time function, the date/time information displays on the screen with a DST icon. “S” indicates summertime and “W” indicates wintertime.

4.3.2 Sear ch by Event

The “Event List” allows users to search wanted video by event. The Event List displays as shown below.

EVENT LIST

FIRST PAGE

DATE	TIME	CH.	TYPE
2011/01/17	11:26:50	2	MOTION
2011/01/17	09:53:03	5	ALARM
2011/01/16	16:14:42	3	ALARM
2011/01/15	03:45:31	1	MOTION
2011/01/12	22:27:56	1	ALARM
2011/01/12	10:09:29	7	MOTION
2011/01/11	12:18:20	6	MOTION
2011/01/10	05:16:00	4	ALARM
2011/01/08	17:11:37	2	MOTION
2011/01/08	16:29:10	8	MOTION
2011/01/08	03:22:17	2	ALARM

The list displays events by date, time, triggered camera, and event type. When the user deletes events other events display. The latest recorded event video list appears on the top. Use the following steps to search event video through the Event List.

- Press Search to enter the Search menu
- To search event video that has been recorded on a specific channel, use the LEFT/RIGHT keys to move the cursor and press Enter to select or de-select a channel
- Select “EVENT LIST” and press Enter to list the event video of the selected channels
- The Event List displays
- To exit the event list, press Exit

Use the following steps to playback video from the Event List.

- Press and hold UP/DOWN to scroll through the Event List
- Press Enter to play the selected event record
- Press Play to return to live mode

4.4 Video Export

The following sections provide information on exporting video through the OSD setup menu. Users can export recorded video to USB memory devices or an included DVD+RW drive. The system log keeps records of all video exportations including duration, start time, and end time.

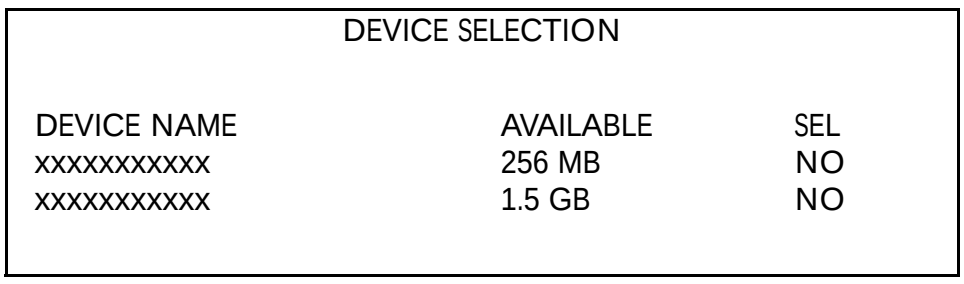
Enter the OSD setup menu with an authorized account. Select “Export” and the menu displays as shown below.

The exported video is named by the exporting date/time and classified by event type. Each recorded video exports into four files including a GPG file, a video file, a signature file, and a readme text file.

If the exporting destination is an external storage device, make sure it is available and connected to the appropriate port for video export. The export time can vary according to the size of the video.

4.4.1 Device Selection

The available devices for exporting video are listed by name and available storage size in the Device Selection menu, as shown below.



Device Name

This item shows the name of the available devices.

Available

This item shows the available storage space of the devices.

Select

Set this item to “YES” to set the available device as an exporting destination or set to “NO” to cancel.

4.4.2 Select Video for Exporting

Select video from the desired channel(s) with a specific date/time and/or event(s), and set the item “BEGIN EXPORT” to “YES” to start exporting.

Cameras

Select the channel to export. Move the cursor to the desired channel using the LEFT/RIGHT keys. Select or de-select a channel by pressing Enter.

From / To

Use these two items to set the time and date for which data export begins and ends. Move the cursor using the LEFT/RIGHT keys and adjust the selected date and time value by using the UP/DOWN keys.

Event Selection
Select this menu item to display the event list. Move the cursor to scroll through the event list and press Enter to select the event(s) to export.

Data Type
Use this menu item to select the exporting video type. The options are “NORMAL” (export normal video only), “EVENT” (export event video only), and “BOTH” (export both normal and event video).

Format
Use this menu item to select the video format. The options are “VIDEOPLUS”, “SYSTEM”, and “AVI”. The SYSTEM file is the original data type while the VIDEOPLUS and AVI files are compressed data types.

The VIDEOPLUS and SYSTEM files can only be played back with the GVIRemote and GVIPlayer. Multiple channel video can be played from one file. The AVI file can be played back with media players. If multiple channels are exported then each channel is exported to a separate file.

4.4.3 Erase Disc
Use this function to remove data found on a DVD+RW disk prior to exporting new information to the media. Select “YES” and press Enter. When the video exportation begins, the data erases at first.

4.5 PTZ Control
The DVR allows users to control a PTZ camera via function keys on the front panel. In Live mode, users can press a CHANNEL key to display the PTZ camera in full screen. To enter PTZ Control mode, press the PTZ key. To exit PTZ Control mode and return to Live mode, press Exit or PTZ.

4.5.1 PTZ Connection
Follow the steps to connect PTZ cameras.
- See ***Setup Guide*** for RS-485 port pin definition
- Connect the RS-485 terminals on the PTZ camera to the D+, D- terminals on the RS-485 port with a RS-485 cable.

4.5.2 PTZ Protocol Setup
The PTZ Protocol menu lists the available PTZ protocols for communicating with PTZ cameras connected to the DVR. From the Device menu, select “CAMERAS” and press Enter. The following menu displays.

CAMERAS

CHANNEL	CH01
CAMERA TITLE	CH1
COVERT	NO
BRIGHTNESS	0
CONTRAST	0
SATURATION	0
HUE	0
PROTOCOL	NONE
PTZ ID	0

To configure PTZ protocol, select a channel first and set the communications protocol associated with the PTZ camera using the Direction and Enter keys.

NOTE: The settings take effect after saving the changes and exiting from the menu.

4.5.3 RS48 5 Setup

The DVR controls the PTZ cameras with the RS-485 communication protocol. Set the RS-485 parameters in the DVR to the same parameters set in the PTZ cameras.

Users can change the RS-485 settings of the DVR. Select “RS-485 SETTING” in the Device menu. The following menu displays.

RS-485 SETTING	
DEVICE ID	224
BAUD RATE	9600
BITS	8
STOP	1
PARITY	NONE

The Device ID number must match the ID address of the PTZ. The Device ID is in the range of 1 to 255. Note that two devices on the same bus cannot have the same Device ID address or a conflict occurs.

NOTE: The settings take effect after saving the changes and exiting from the menu.

4.5.4 PTZ Controlling Buttons

Press PTZ to enter the PTZ Control mode and the PTZ control panel displays. The control buttons include: Iris Close/Open, Focus Far/Near, Zoom Out/In, Preset Settings, Exit, Pan/Tilt Speed, Direction buttons, and Auto Focus. See the following descriptions for more information.

Iris Close
Click on this function to close the Iris on the PTZ camera.

Iris Open
Use this function to open the Iris on the PTZ camera.

Focus Far
Click this item to focus the lens of the selected PTZ camera on a farther point.

Focus Near
Click this feature to focus the lens of the selected PTZ camera on a nearer point.

Zoom Out
Use this feature to zoom the lens out of the selected PTZ camera. This function enables users to shrink the current image so that a larger viewing area displays.

Zoom In
Click on this function to zoom the lens in of the selected PTZ camera. This function enables users to enlarge a certain area.

Preset Settings
Use this key to enter the PTZ Preset menu and set up certain positions as presets and use the predetermined preset positions for viewing.

Exit
Click on this feature to exit the PTZ Control mode and return to Live full-screen display mode.

Pan/Tilt Speed
Users can select the preferred pan/tilt speed.

Direction Buttons
Click on the buttons to pan and tilt the lens of the selected PTZ camera.

Auto Focus
Click on this button to automatically adjust the focus of the selected PTZ camera.

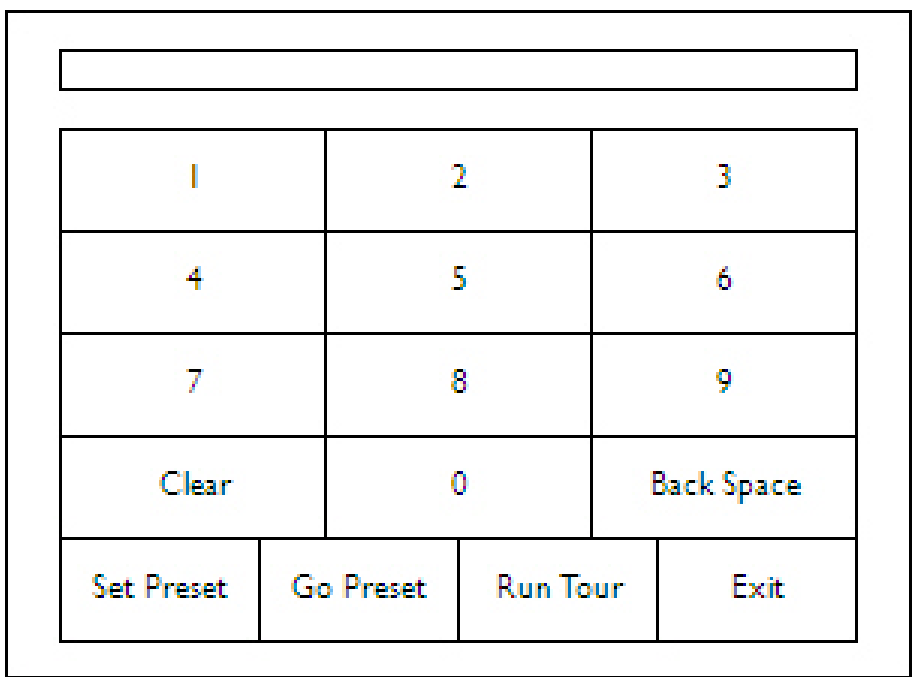
The front panel can also perform the functions described above.

4.5.5 Set Preset Points

Users can setup preset points in the DVR. The amount of preset points depends on the manufacturer of the PTZ camera.

Follow the steps to setup preset points.

- Press a Channel key to view the selected channel in full screen
- Press PTZ to enter PTZ Control mode and the PTZ control panel displays
- Use the Direction keys to position the PTZ camera to the desired position
- Click on “PRESET SETTINGS” to access the Set/Go Preset function and a numeral keyboard displays as shown below.

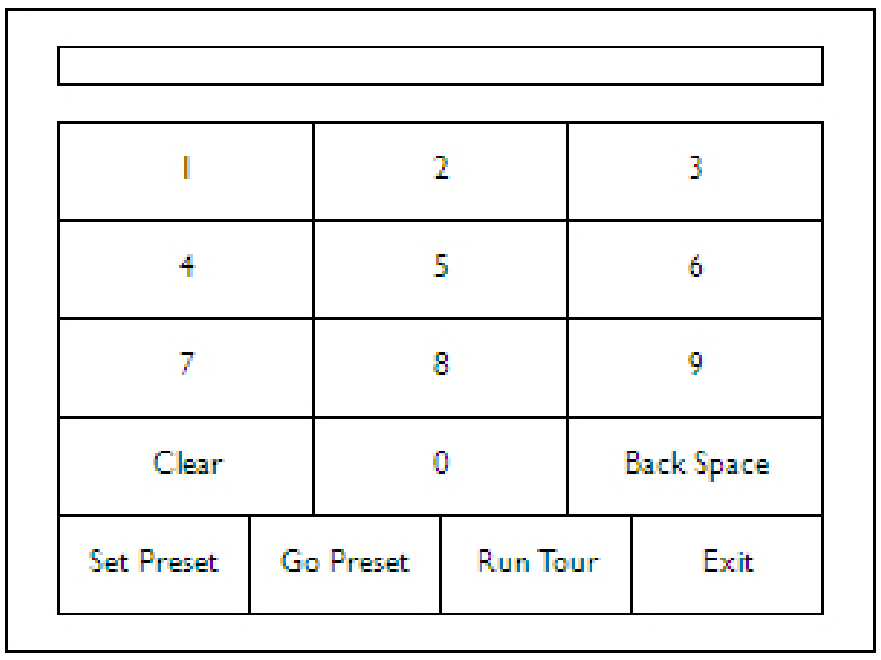


- Input a desired preset number
- Click on the “Set Preset” button to save the position
- The preset point is set and ready to use

4.5.6 Call Preset Points

Use the following steps to call preset points.

- Press a Channel key to view the selected channel in full screen
- Press PTZ to enter PTZ Control mode and the PTZ control panel displays
- Click on “PRESET SETTINGS” to access the Set/Go Preset function



- Input a desired preset number
- Click on the “Go Preset” button to call the preset point
- The selected PTZ camera rotates to the preset position automatically

4.5.7 PTZ Shortcut Key Combinations

If the DVR is in PTZ Control mode, use the following key combinations to control the PTZ functions.

- Enter dome menu: KEY LOCK + ENTER
- Move cursor up: KEY LOCK + UP
- Move cursor down: KEY LOCK + DOWN
- Move cursor right: KEY LOCK + RIGHT
- Move cursor left: KEY LOCK + LEFT

5.0 GVIRemote

The GVIRemote is browser-based software designed to operate the VideoPlus DVR products. Users can view live and recorded video and configure the DVRs remotely using a LAN, WAN, or Internet on a personal computer.

The connected PC automatically downloads the GVIRemote plug-ins from the DVR when the DVR is connected by entering its IP address in the address bar on the browser.

The following tasks are available with the GVIRemote.

- Remote viewing of live/ recorded video
- Remote setup of the DVR
- Remote control of PTZ cameras
- Alarm notification from the DVR
- Up to three connections to one DVR using the GVIRemote, including the preset “admin” and two other accounts

5.1 GVIRemote System Requirements

Items	Minimum Requirements
Personal Computer	Minimum: Intel® Pentium® M CPU 1.40GHz RAM 512 MB
	Recommended: Intel® Core™2 Quad CPU Q6600 @ 2.4GHZ RAM 2 GB
Hard Disk Drive	Requires 20 MB for software installation
Operating System	Windows XP, Windows Vista, Windows 7
Web Browser	Microsoft Internet Explorer version 6.0 or above
Monitor Resolution	Minimum 1024 x 768 with 16-bit color
Network Card	10Base-T (10 Mbps) or 100Base-TX (100 Mbps) operation; must match the network configuration

5.2 Installation of Software

Refer to the following description to install the GVIRemote.

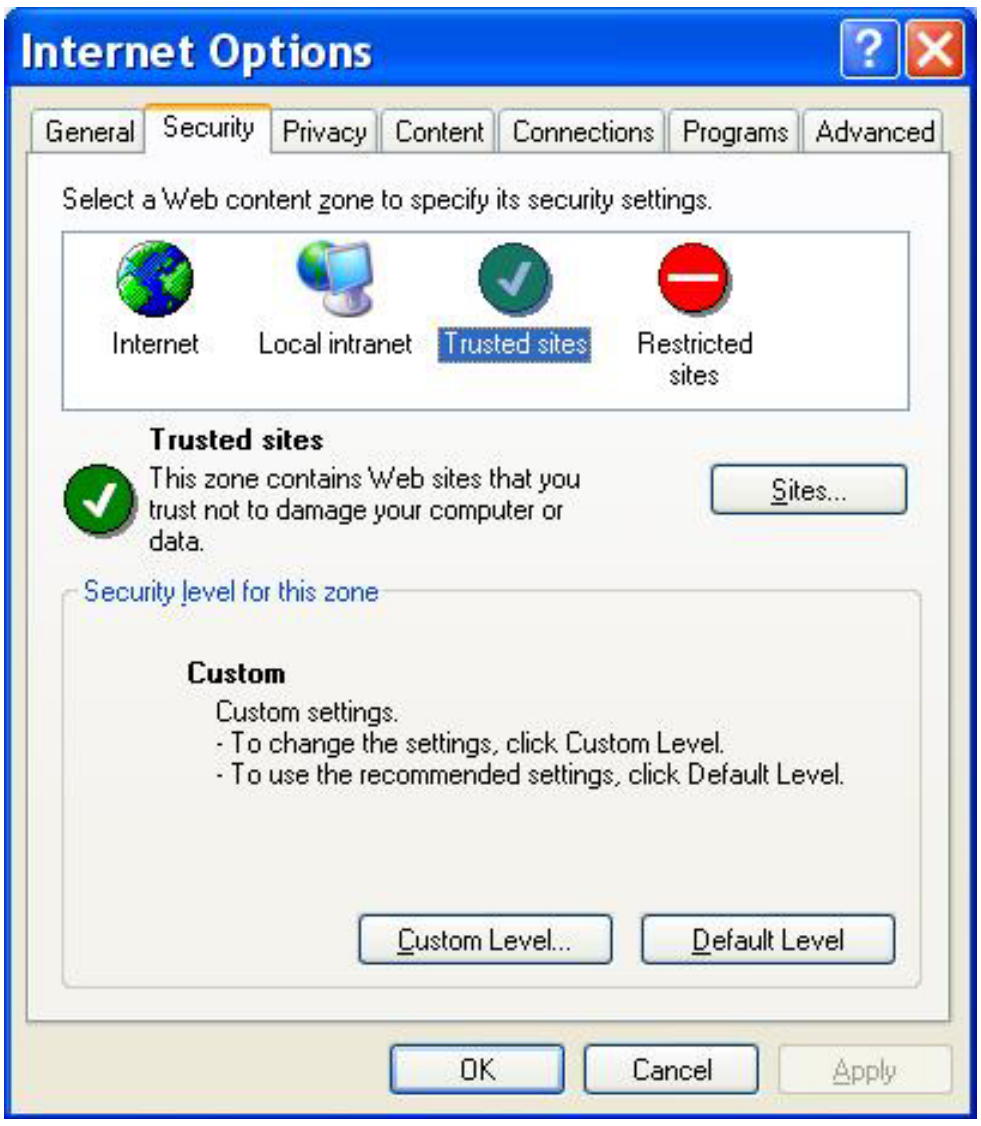
5.2.1 Change Internet Settings

Set the PC operating with the GVIRemote to accept ActiveX plug-ins. Use the following steps to set the Internet security settings appropriately.

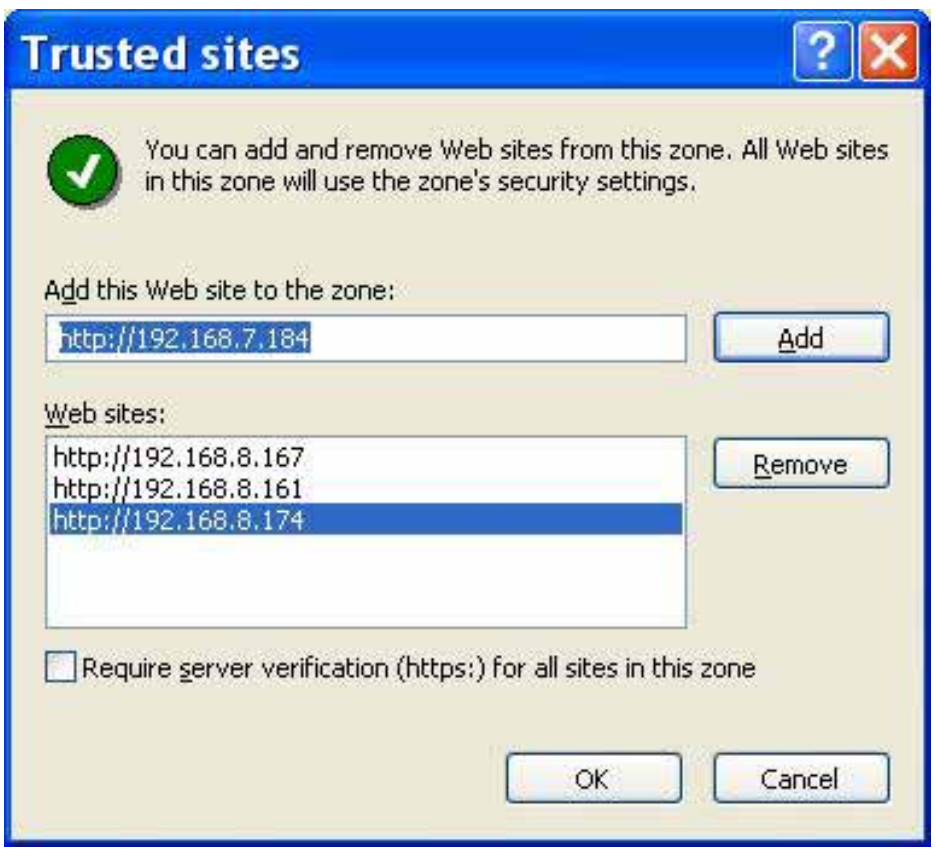
- Before operating the GVIRemote, check the IP address of the DVR. Press Menu key and login with an authorized account to access the OSD setup menu. Select “Network” then “IP SETUP” to check the IP address of the DVR.
- Access Internet Explorer (IE)

Note: Windows IE provides the ActiveX component required for the GVIRemote.

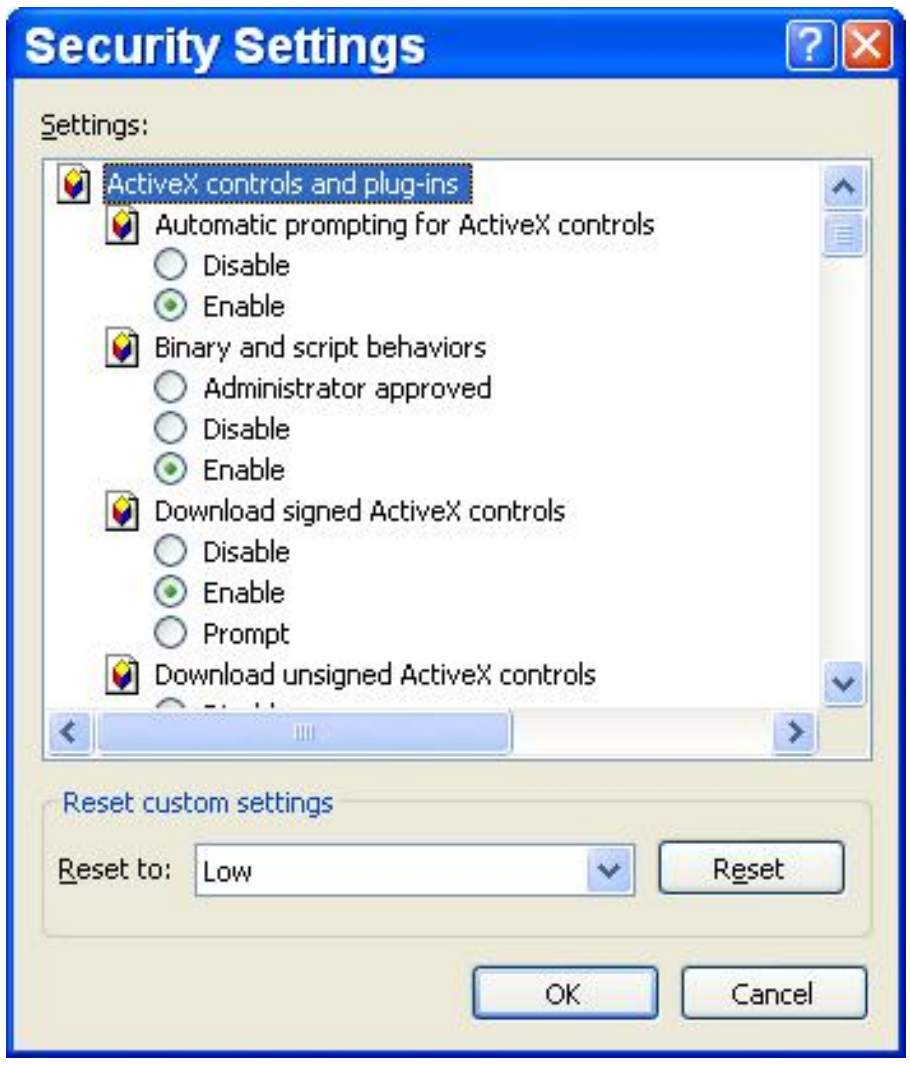
- Select “Tools” from the main menu of the browser, select “Internet Options”, and click the “Security” tab.
- Select “Trusted sites” and click “Sites” to specify the security setting.



- Uncheck "*Require server verification (https:) for all sites in this zone*". Type the IP address of the unit in the field, and click "Add" to add this web site to the zone.



- Click "OK" to confirm the setting and close the *Trusted sites* dialog box.
- In the Security Level area, click "Custom Level". The *Security Settings* screen displays.



- Under “ActiveX controls and plug-ins”, set all items to “Enable” or “Prompt”.
- Click “OK” to apply the setting and close the *Security Settings* screen.
- Click “OK” to close the *Internet Options* dialog box.

5.2.2 Install the GVIRemote

Start the browser to initiate the installation of the GVIRemote on the PC. The user has the option of saving the IP address of the DVR as a Favorites item in the web browser to enable easier access in the future.

Start Internet Explorer; enter the IP address of the DVR in the address bar at the top of the browser.

The ActiveX controls and plug-ins dialog box displays twice for confirmation; click “Yes” to accept ActiveX plug-ins. The GVIRemote plug-in downloads and installs on the PC automatically when the connection is a success.

NOTE: Do not enter any leading “0” characters in the address (e.g., Enter “192.068.080.006” as “192.68.80.6”). If default trigger port 80 changes into another one, (e.g., port 81 for example) enter the IP address as “192.68.80.6:81”.

- A version check verifies whether the GVIRemote was previously installed and determines if the version is the same as that stored in that particular DVR. This process may take up to 30 seconds.
- When the software completely downloads and installs the Login Screen displays.

Enter Network Password
This secure Web Site (at 192.168.7.184) requires you to log on.
Please type the User Name and Password that you use for DVR.
User Name
user
Password
****
Save this password in your password list
OK
Cancel

Login / Logout

Login using the same accounts setup in the DVR. The privilege level is also the same as setup in the DVR.

The preset “admin” account and two other accounts can access the DVR at the same time. If the “admin” account is currently accessing the unit’s OSD setup menu through the front panel of the unit, then the “admin” account at the GVIRemote site cannot change the settings at the same time. The “admin” account at the DVR site has access priority.

Enter Network Password
This secure Web Site (at 192.168.7.184) requires you to log on.
Please type the User Name and Password that you use for DVR.
User Name
user
Password
****
Save this password in your password list
OK
Cancel

The following steps demonstrate connecting the DVR using the GVIRemote.

- Start the GVIRemote by entering the IP Address of the DVR in the Address bar of the browser. Alternatively, click on the Favorite entry for the unit (if the IP address of the unit has been stored).
- Enter the Username and password. The login username and password can be saved for future logins. The default username and password is **admin/1234**.
- Click “OK” to login to the DVR. The process may take a few seconds.
- If the connection is made successfully, the main window displays live video of the connected cameras.

If the IE browser closes, users are logged out of the GVIRemote and disconnected from the DVR at the same time.

Software Upgrades

If a new version of the GVIRemote is available on the DVR, an upgrade suggestion prompts while accessing the unit. Follow the steps to upgrade the software.

Confirm
An Incompatible version of VideoViewer.ocx was detected on your PC.
Would you like to download the correct version for proper operations?
Notice: You must have Windows Administrator privilege to update successfully.
Please start your browser again after it closed.
Yes
No

- Click “Yes” to accept version upgrade
- Open the IE browser again and enter the IP address of the DVR in the Address bar of the browser
- When the software is completely downloaded and installed, the Login Screen displays

5.3 Basic Operation

When a DVR is successfully connected, the main window of the GVIRemote displays. Refer to the ***Setup Guide*** for the graphical illustration of functional items.

Follow the GVIRemote functions described below.

5.3.1 View Live Video in Different Display Modes

When a DVR is successfully connected, live video from the cameras of the DVR displays. There are several types of display modes: full-screen, 2x2 windows, 3x3 windows, and 4x4 windows.

To change the live view layout, click on the icons at the bottom-left portion of the screen. To view certain channel in full-screen, either double-click its display grid, or click on the corresponding CAMERA button.

5.3.2 PTZ Camera Control

The GVIRemote allows users to control and configure a PTZ camera remotely.

Click on any CAMERA button with a PTZ icon to view the camera in full-screen. The PTZ Control Panel displays at the right-hand side. See the descriptions on the PTZ Control Panel below.

Focus +/−

Use this function to adjust the camera lens to focus on objects. Click on “Focus +” to focus near or “Focus −” to focus far.

Iris +/−

Use this menu item to open and close the iris to let more or less light into the camera. Click on “Iris +” to open iris or “Iris −” to close iris.

Zoom +/−

Users can zoom-in or zoom-out using the adjusting buttons. Zoom-in to enlarge a certain area and zoom-out to view more area.

Auto Focus (A.F.)

Use this feature to adjust the focus of the camera automatically to show a clearer image.

Set/Go Preset & Run Tour (•←)
The remote monitoring software feature stores up to 255 preset points according to the allowance of the supported dome cameras.

Use the Direction buttons to pan/tilt the dome camera to an appropriate position. Click "Set Preset" and choose a preferred number from the pull-down list. The preset point is named as the selected number.

Select "Go Preset" and choose a preferred number from the pull-down list to call the preset point for viewing.

Select "Run Tour" to start the tour set previously at the dome camera side.

Direction Button
Use this button to pan and/or tilt the dome camera. Click the arrows in the directions to view.

PTZ ID (ID)
Select this item to change the dome ID and protocol. Only authorized users can access this function.

5.3.3 Instant Recording

With the Instant Recording function, users can record video instantly on the PC.

Note: The Audio function is set to OFF as the default setting.

Follow the steps below to start recording instantly:

- Click on the "Instant Recording" button
- Select the destination folder to save the video
- Click on the button again to stop recording

Note: The recorded videos are saved as VIDEOPLUS files.

5.3.4 P layback Video

With the GVIRemote users can view recorded video either from the DVR or from the HDD of the PC.

To access the Playback screen, click the "Play" icon at the bottom. There are three tabs in the Playback screen: "Remote Playback", "Local Playback", and "Verify" tabs. "Remote Playback" allows users to play back from the DVR. "Local Playback" enables users to playback a recorded video file stored in the HDD of the PC. "Verify" is provided for users to authenticate if the exported video is altered.

The DVR continues recording while playing the recorded video on the PC, either as a remote playback or a local playback.

Playback Remote Video
To playback remote video, click the "Play" icon at the bottom, then select "Remote Playback" tab. The "Remote Playback" screen displays.

The "From" and "To" fields in the "Available Record Video" display the date and time from which the recorded video is available for playback.

To playback video segments remotely, follow these steps:

- Select “Playback” in the “Select” field to playback recorded video
- In the “Start” field, users can change the date/time either by typing desired numbers directly or using the arrow buttons

To type directly:
Click on the day, month, and year of date fields, and type the desired numbers directly. Follow the above steps to adjust the hour, minute, and second of time fields.

To use the arrow buttons:
Click on the arrow button next to the date field to display the calendar; then click the left and right arrow at the top of the calendar to change the date. Use the up and down arrows next to the time field to change to the wanted time.

- The other way to select date and time is by moving the blue sliding bar
- Click “OK” to start the playback, or click “Close” to cancel
- The “Download (.VPS)” option in the “Select” field enables users to download the video segment of a selected date and time to the PC. The selection of time duration is the same as described above. Files downloaded are in VIDEOPLUS format.

Playback Local Video Files

The “Local Playback” tab allows users to playback video files stored in the PC's HDD.

Follow the steps below to playback downloaded or instantly recorded video files.

- Click “Open” and the file selection screen displays
- Select the video file for playback and click “OK”
- Click “OK” in the “Local Playback” screen to start the playback, or click “Cancel” to cancel
- View the video playback using the Playback controls
- To end the playback, click “Stop” to return to live video

Playback Controls

When the local or remote video is playing, the GVIRemote is in Playback Mode. The playback controls toolbar displays. See below for the Playback controls and indicators descriptions.

Icon	Name	Description
◄◄	Fast Backward / Step Backward	1. Click to play the video in backward direction. Click repeatedly to select backward playback speed: 1×, 2×, 4×, 8×, 16×, or 32×. 2. When playback is paused, click repeatedly to move backward step-by-step.
► / ❚❚	Play / Pause	1. While playing, click to pause the playback. 2. When paused, click to resume the playback.
►►	Fast Forward / Step Forward	1. Click to play the video in forward direction. Click repeatedly to select forward playback speed: 1×, 2×, 4×, 8×, 16×, or 32×. 2. When playback is paused, click repeatedly to move forward step-by-step.
■	Stop	Click to stop playback and return to live display.

5.3.5 Verify Digital Signature

The digital signature aims to authenticate a video file exported from the unit. Follow the description to verify the digital signature.

- Click the “Play” icon at the bottom of the screen
- Click the “Verify” tab to display the Verify window
- Click “Browse” to select the required files which belong to the exported video for authenticating
- Click “Verify” to start verifying the digital signature
- The result of verification displays and returns a GOOD or BAD signature result. A GOOD signature indicates the exported clip was not altered.

5.3.6 Search from Event List

Click SEARCH to display the Event List. The List contains information about the alarm events that the unit recorded and saved. The unit can list up to 1024 events in the Event List.

The Event List displays each event by its number, the date and time of the event, the type of the event (including Alarm In, Motion Detection, and Video Loss), and the camera channel where the event occurs.

Follow the steps below to view an event video.

- Click the SEARCH icon at the bottom of the screen
- The Event List appears
- Scroll through the Event List and highlight the interested events
- Double-click on the desired event to playback the event video

5.3.7 Take a Snapshot

Snapshot is a screen capture tool. When users click on the SNAPSHOT icon, it captures the screenshot of the current camera display. Users can select a preferred filename and folder destination.

5.3.8 Health Status

This function verifies the HDD status of the DVR. The information items in the popup window are described below.

Device Name

This item shows the model name of the HDD.

Total Size

This item shows the total size of the HDD.

Temperature

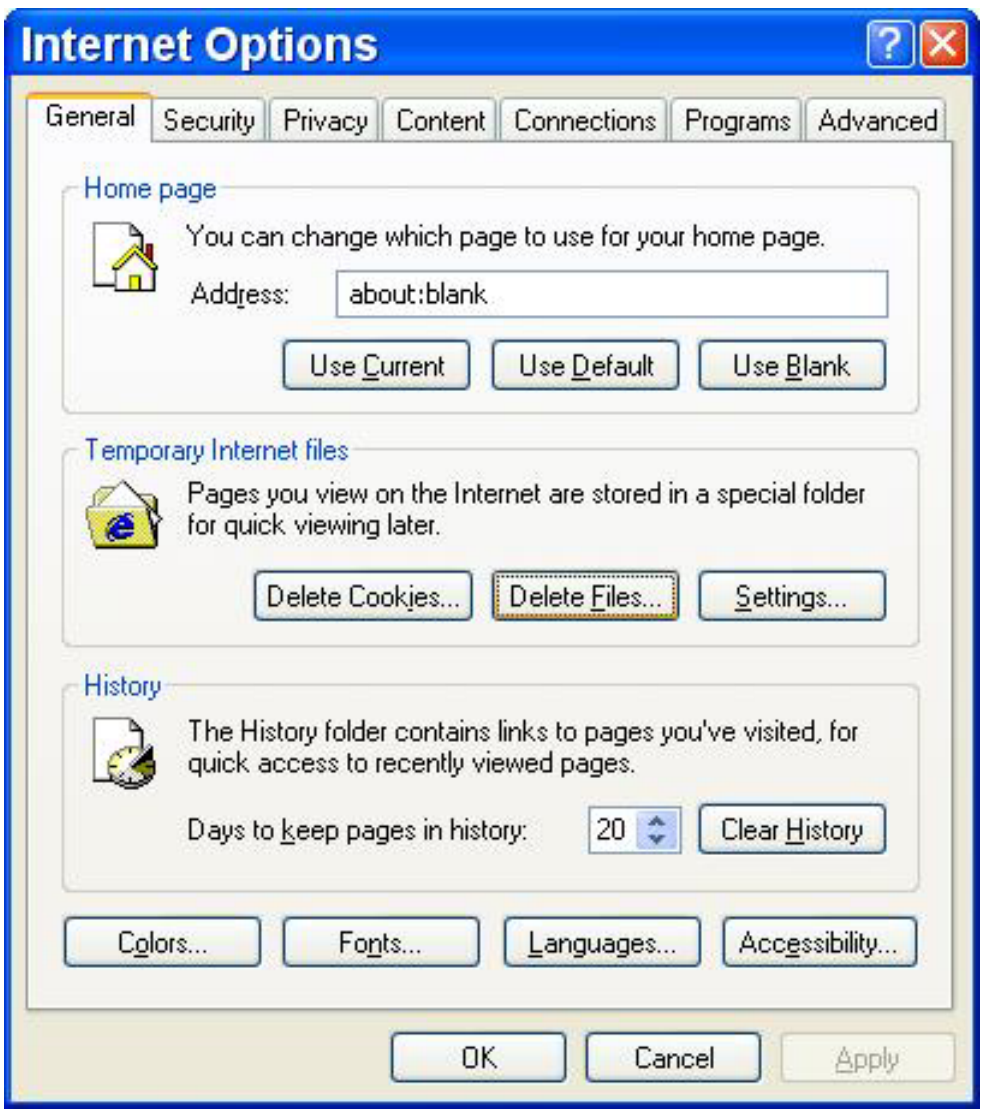
This item shows the current temperature of the HDD in Celsius degrees.

5.3.8 GVIRemote Troubleshooting

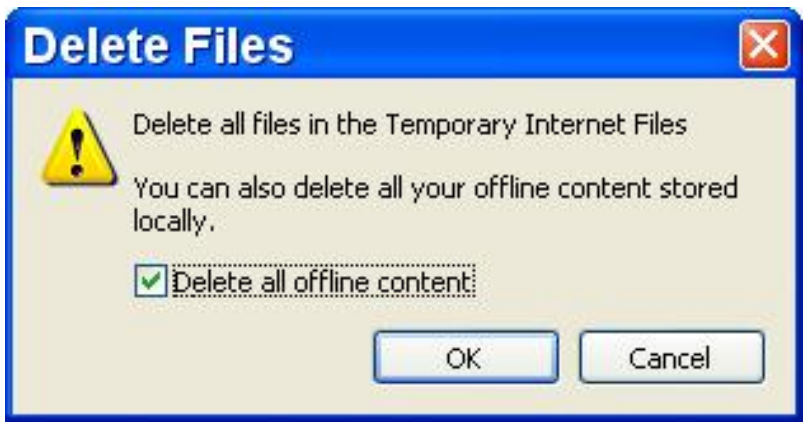
If the server requests to upgrade the software every time the DVR connects, then follow the steps below to delete the temporary internet files.

Confirm
An Incompatible version of VideoViewer.ocx was detected on your PC.
Would you like to download the correct version for proper operations?
Notice: You must have Windows Administrator privilege to update successfully.
Please start your browser again after it closed.
Yes
No

- Select “Tools” from the main menu of the web browser, select “Internet Options”, and click the “General” tab.



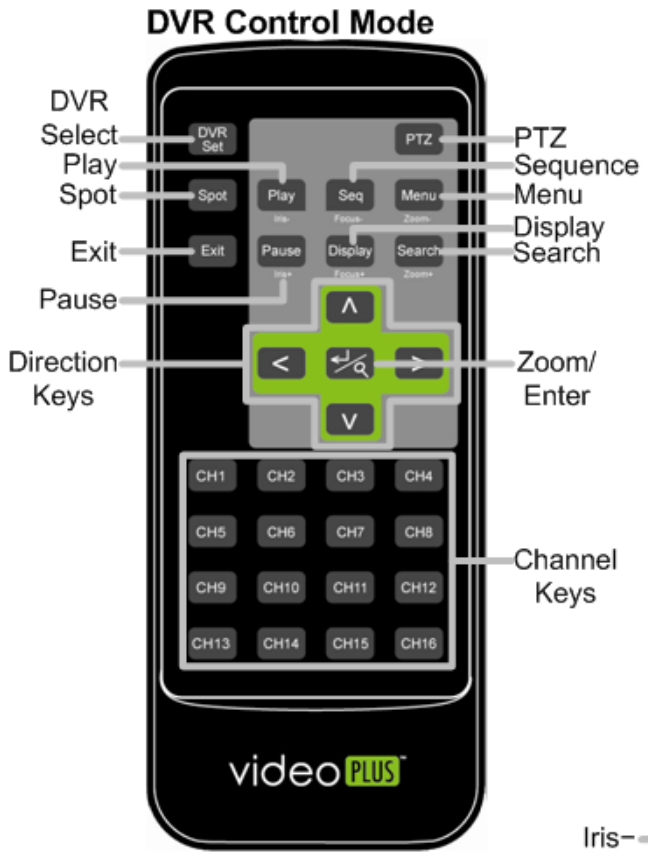
- Click the “Delete Files” button in the “Temporary Internet Files” field; the “Delete Files” screen displays as shown below.

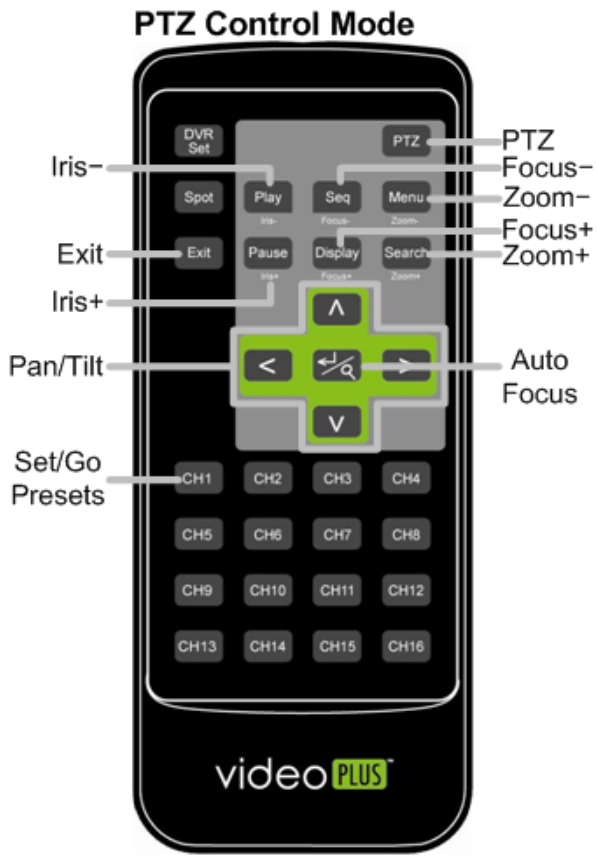

Delete Files
Delete all files in the Temporary Internet Files
You can also delete all your offline content stored locally.
Delete all offline content
OK
Cancel

- Check the “Delete all offline content” box and click “OK”.
- Enter the IP address of the DVR to make the connection again.

Appendix A: Remote Controller

The operational function keys on the remote control are listed as below figure:





The keys of the remote control function are the same as the keys of the front panel of the DVR. The only difference between the remote control and the front panel keys is the “DVR SEL” key. Use the DVR Selection key to switch control between each DVR. Use the remote control to control up to 16 DVRs. To setup the remote control, assign a unique DVR ID to each DVR.

Use the front panel of the DVR to enter the OSD setup menu, and follow this path to change the DVR ID: “Device” → “RS-485 SETTING” → “DEVICE ID”. Change the DVR ID to any number between 224 and 239, and exit the menu. See the ID Table below for reference.

DVR ID	224	225	226	227	228	229	230	231
Remote Control #	1	2	3	4	5	6	7	8

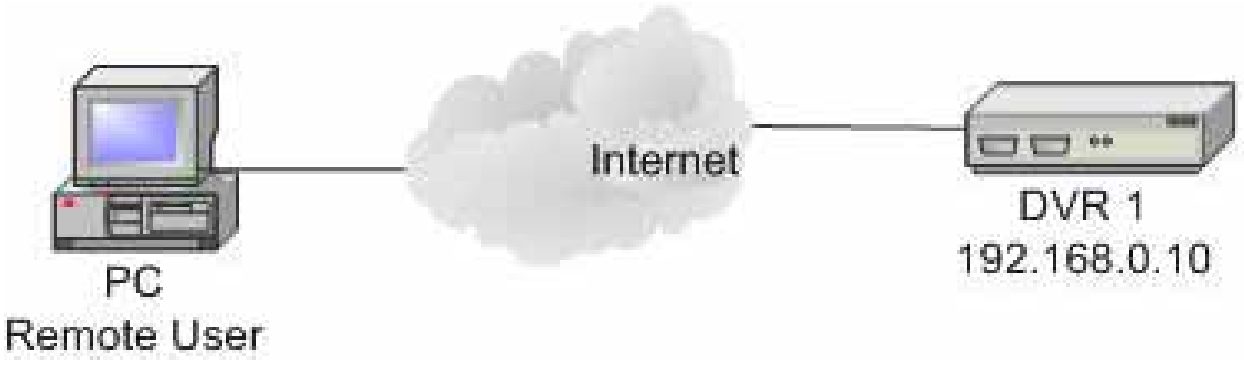
DVR ID	232	233	234	235	236	237	238	239
Remote Control #	9	10	11	12	13	14	15	16

After changing the DVR ID, setup the “DVR SEL” of the remote control. Press “DVR SEL”, and then press the Remote Control # immediately to select the DVR. For example, assuming the DVR ID is set to 225, press “DVR SEL” and then press “2” immediately. Now, the remote control is only able to control the specified DVR. Press “DVR SEL” and press the Remote control # to switch between DVRs. To exit the single DVR Control mode, press “DVR SEL”, and press “Exit”.

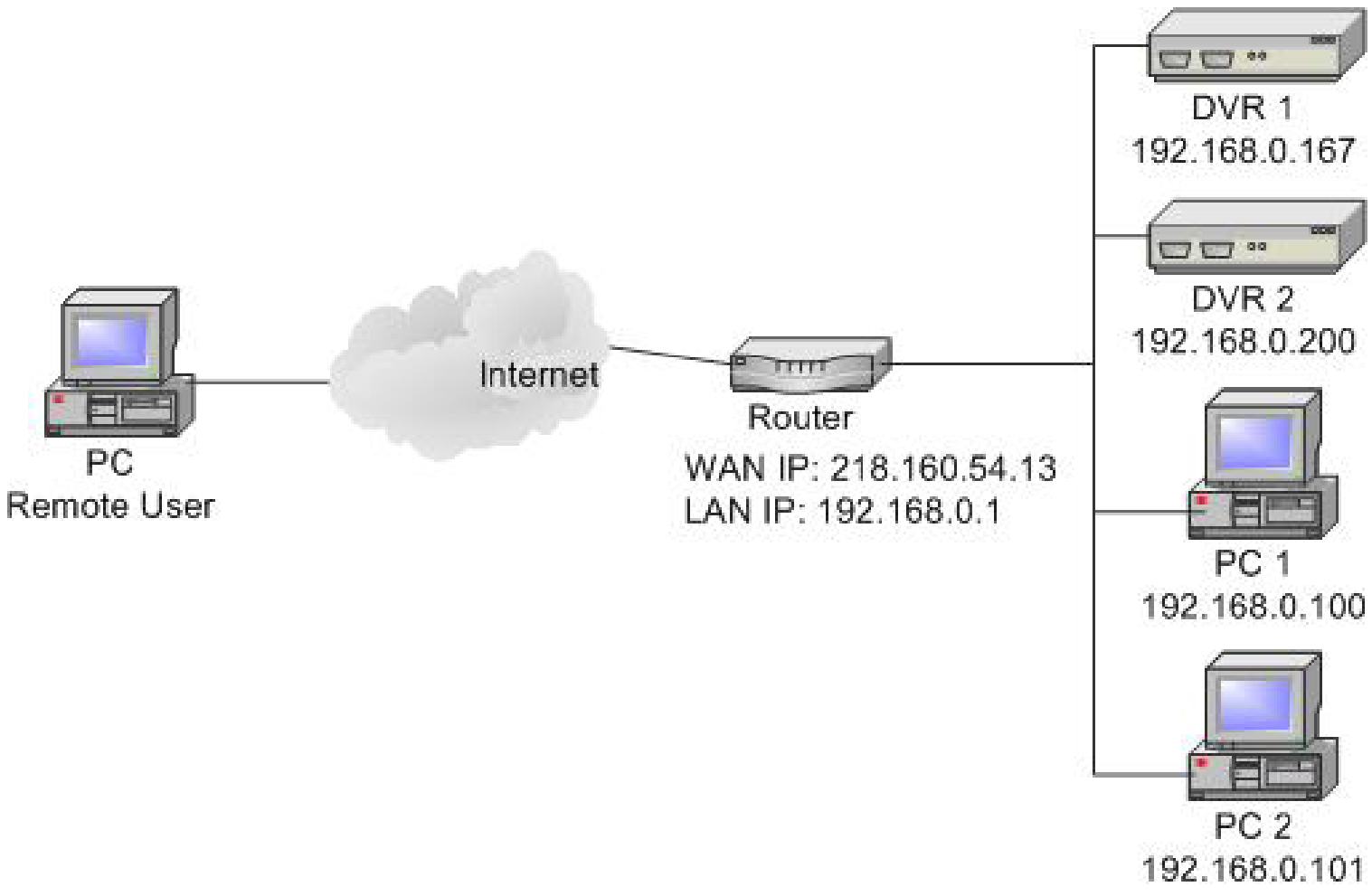
Appendix B: Setting up a DVR behind a Router

This appendix describes how to setup a router if the DVR connects to the internet via a router. The following information includes examples of a particular router, and while specific to it, the function of port forwarding is a common feature among all routers.

To properly operate a web server, (e.g., a DVR) set up both the IP and port of the DVR, which are essential for data and command transmission. The port setting is adjustable in the OSD setup menu of the DVR and only one port is needed to do remote operation. Typically and by the default, the DVR operates on port 80, which is the http port. Ensure that port 80 is not blocked by the ISP; otherwise, a different available port resets and the setting of the DVR changes.



If a router or DSL modem is in place, the real IP is assigned to the router instead of the DVR. The DVR is located behind the firewall (router) and operates on virtual IP. In most cases, virtual IP starts with 192.168.x.x. The router has two IP: one is real IP (WAN IP) and the other is virtual IP (LAN IP). The virtual IP is 192.168.x.1. When remote users operate the DVR, they first send command to the real IP (i.e., the router). Then the router maps (forwards) the command to the DVR. Set up the router for port mapping (forwarding) before images from the DVR are remotely viewed on a PC.



See the specific router manufacturer's websites for more instructions on port mapping.

The following information is one **example** of how to set up a specific router. A PC with a web browser is required to change the setting of the router. Use the router connected to the PC. The setup screen displays after entering the correct username and password. For example purposes, the GV-DSR-500 is referenced below. The GV-DSR-500 requires that the administrator first create custom services. This process defines the ports to use within a firewall rule. See the example below for more information.

After defining the custom services (ports), the administrator creates firewall rules to use as a pathway of communication to a specific internal address (port forwarding). For more details on this process, see the example below.